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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/923,306	07/29/2003	Wayne B. Sherman		9984

7590
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EXAMINER

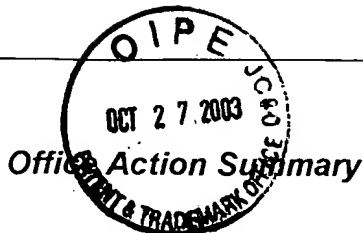
HAAS, WENDY C

ART UNIT PAPER NUMBER

1661

DATE MAILED: 07/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.



Application No. 09/923,306	Applicant(s) SHERMAN, WAYNE B.
Examiner Wendy C Haas	Art Unit 1661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

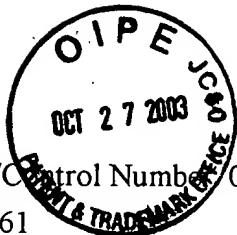
- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:



DETAILED ACTION

Drawings

The drawings remain objected to under 37 CFR 1.165(a) as the paper on which the photographic illustration is printed is too small. New drawings are required. Applicant indicated in the amendment filed March 12, 2003 that new drawings would be provided by June 1, 2003, however no drawings have been received in the case.

Objection to the Disclosure

37 CFR 1.163

The following is a quotation of section (a) of 37 CFR 1.163:

(a) The specification must contain as full and complete a disclosure as possible of the plant and the characteristics thereof that distinguish the same over related known varieties, and its antecedents, and must particularly point out where and in what manner the variety of plant has been asexually reproduced. In the case of a newly found plant, the specification must particularly point out the location and character of the area where the plant was discovered.

35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

As specific to United States Plant Patent applications, the specifics of 37 CFR 1.164 (reproduced below) are controlling:

The claim shall be in formal terms to the new and distinct variety of the specified plant as described and illustrated, and may also recite the principal distinguishing characteristics. More than one claim is not permitted.

Art Unit: 1661

In plant applications filed under 35 U.S.C. 161, the requirements of 35 U.S.C. are limited. The following is a quotation of 35 U.S.C. 162:

No plant patent shall be declared invalid for noncompliance with section 112 of this title if the description is as complete as is reasonably possible. The claim in the specification shall be in formal terms to the plant shown and described.

The disclosure remains objected to under 37 CFR 1.163 (a) and under 35 U.S.C. 112, first paragraph, because the specification presents less than a full, clear and complete botanical description of the plant and the characteristics which define same per se and which distinguish the plant from related known cultivars and antecedents.

More specifically, from the first Office Action:

B. Applicant should provide a photographic illustration of the fruit flesh and stone of the instant cultivar, as the illustration provided must show all the distinctive features of the plant capable of representation. Additional information is needed. Applicant indicated that photographs would be forwarded to the Examiner by June 1st, however no drawings have been received.

C. Applicant provided more detailed information regarding the bloom of the instant plant in response to the first Office Action, however applicant must still provide additional information, specifically, sepal number, sepal size, sepal length and width, sepal shape, sepal color with reference to the employed color chart, sepal margin shape, petal shape, petal number, number of stamens, stamen color, stamen size, number of pistils, pistil color, pistil size and calyx diameter.

The above listing may not be complete. Applicant should carefully compare the claimed plant with the botanical descriptions set forth in the specification to ensure completeness and accuracy and to distinguish the plant within this expanding market class. Any further botanical information should be imported into the specification, as should any additional or corrected information relative to same.

Art Unit: 1661

Claim Rejection

35 U.S.C. § 112, 1st and 2nd Paragraphs

Claim 1 remains rejected under 35 U.S.C. 112, first and second paragraphs as not being supported by a clear and complete botanical description of the plant for reasons set forth in the Objection to the Disclosure Section above, and under 35 U.S.C. 112 first paragraph for the reasons advanced in the objection to the drawing.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Comments

Please note, the mailing address of the USPTO has changed. Mail may be sent to:

COMMISSIONER FOR PATENTS
P.O. BOX 1450
Alexandria, VA 22313-1450
MAIL STOP: AFTER-FINAL Amendment

Or, material may be faxed to (703) 872-9307.

THE EXAMINER MAY NO LONGER RECEIVE OFFICIAL FAXES OR HAND-DELIVERIES.

Future Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wendy C. Haas whose telephone number is (703) 308-8898. The Examiner is normally available Monday through Friday from 9 a.m. to 5:30 p.m.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Bruce Campell, can be reached on (703) 308-4205. The fax number for the group is (703) 872-9307.

Any inquiry of a general nature or relating to the status of this application should be directed to the Matrix Customer Service Center whose telephone number is (703) 872-9305.

W. C. Haas

BRUCE R. CAMPELL, PH.D
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600



Nectarine Tree Named 'Sunbest'

BOTANICAL CLASSIFICATION

Prunus persica. —

Background of the New Variety. The present invention relates to a new and distinct variety of nectarine [*Prunus persica* (L.) Batsch] tree adapted to a subtropical (low chill) winter climate. This new tree, named 'Sunbest', produces highly colored, good eating quality, semi-freestone, melting flesh fruit for fresh market in early May at Gainesville, Florida. Contrast is made to 'Sunraycer' (unpatented) nectarine, a standard variety, for reliable description. 'Sunbest' is a promising candidate for commercial success in that it has large, attractive red skin, sweet fruit that ripen evenly.

Origin of the Variety. 'Sunbest' nectarine tree (genotype) originated in a cultivated area of the fruit breeding program at the University of Florida, located at Gainesville, Florida where it was tested. The seed parent was 'Sunraycer' nectarine and the pollen parent was 'Suncoast' (unpatented) nectarine. 'Sunbest' nectarine was selected in 1994 because it exhibited yellow, melting flesh, in a large fruit with a bright red skin. It was designated and tested as Fla. 94-15n. It was asexually propagated by budding onto 'Flordaguard' (unpatented) seedling rootstock (for root-knot nematode control) and determined to have unique tree and fruit characteristics making it worthy for commercial fresh fruit production. There are no known effects of this standard rootstock on this scion cultivar. Asexually propagated plants remained true to the original tree and all characteristics of the tree and the fruit were transmitted.

Summary of the Variety. The new and distinct variety of nectarine tree bears moderately early ripening fruit, and has a low chilling dormancy requirement. 'Sunbest' blooms (non showy flowers) with 'Sunraycer' nectarine in early February at Gainesville. The estimated chilling requirement is 225 chill units, based on bloom 1 to 2 days before 'Sunraycer'. 'Sunbest' nectarine tree is characterized

by bright red skin fruit having firm, melting and yellow flesh. Fruit are semi-freestone and of good flavor and eating quality. The trees are vigorous, productive and regular bearing. Trees attain in two years, a height of two meters and a spread of one and a half meters at Gainesville. Terminal growth of up to a half meter annually is common on mature five-year-old trees with normal pruning to a vase shape.

The first fruit ripen in early May at Gainesville or in about 80 to 85 days from full bloom, which is about 3 to 5 days before 'Sunraycer'. The fruit are uniformly large (about 20% larger by weight than 'Sunraycer') for an early-mid season nectarine. Ripe fruit have 90 to 100% solid (no stripes) red skin with a small amount of red pigment in the flesh at the tip end of the fruit, especially on trees stressed during hot, dry weather. There is no red pigment in the flesh at the pit. The flower anthers are light red to yellow, and leaf glands are reniform, common characteristics of many standard nectarine varieties.

Description of the Drawings. The accompanying drawing is a color photograph which shows a typical specimen of the fruit, leaf, and stem of the new variety as nearly true as it is reasonably possible to make in a color illustration of this type. The photograph shows an attractive shape and exterior coloration of four specimens of fruit above a ruler in side view, stem end view, a blossom end view, a side view showing the suture and a fruit cut longitudinally to show the pit.

Detailed Botanical Description. The tree, flowers, and fruit may vary in slight detail due to variations in soil type, cultural practices, and climatic condition. The potential for commercial production of fresh fruit by 'Sunbest' is high, due to its attractive red skin over a bright yellow ground color, large fruit of good flavor, and good firmness with even ripening throughout the fruit. The present botanical description is that of the variety grown on 5-year-old trees on 'Flordaguard' rootstock under the ecological conditions prevailing at Gainesville, Florida. Colors (except those in common terms) are

described from "The Pantone Book of Color", published by H. N. Abrams, Inc., N.Y. 1990.

Tree:

Ploidy. - Diploid

Size. - Trees are medium stature when trained to an open vase form.

Vigor. - Moderately vigorous, and must be summer and winter pruned when grown to a vase shape to keep the tree open to get strong fruiting wood in the lower center. Trees respond typically to irrigation and fertilization. Tree growth of 4 to 6 feet in height and 3 to 5 feet in width occurs the first growing season in the field.

Density. - Light to medium in branching habit. Foliage density is high due to short internodes (8 to 11 nodes\10cm shoot length). Internode length is shorter than in most standard varieties. Pruning is required to open the tree center to promote sunlight entrance for enhancing fruit color and sugar.

Form. - Semi-upright, but easily spread when pruned to vase shape.

Hardiness. - Hardy with respect to typical north central Florida winters.

Bearer. - Very productive annually without alternate bearing observed. Trees are self fertile and must be fruit thinned to avoid limb breakage and obtain large fruit size. Yields equivalent of 200 bushels (50 lbs. each) per acre have been obtained on 5-year-old hand thinned trees under a commercial simulated orchard culture at Gainesville. Trees annually set several times the number of fruit for a desired crop load.

Chilling requirement. - Estimated endodormancy chilling requirement is 225 chill units based on time of bloom and leafing.

Trunk:

Size. - Medium trunk diameter attaining 8 cm diameter at a height of 30 cm at the end of 3

years growth at Gainesville.

Texture. - Medium smooth, but changes to medium shaggy as tree ages.

Bark color. - Older bark gray, Chinchilla (Pantone 17-1109).

Lenticels. - Numerous (23 per 4 square inches of surface area of trunk) and small (2-5mm length perpendicular to the trunk) with the center being yellowish brown, Medal Bronze (Pantone 17-0942).

Branches:

Size. - Strong growth of scaffold branches. Fruiting branches mostly large diameter (4 to 6 mm) and not overly numerous, resulting in strong fruiting wood. Thus, the tree growth and structure permits easier and faster winter pruning.

Texture. - Relatively smooth, numerous lenticels attaining size found on trunk and old scaffolds. Roughness increases with age.

Color. - New wood is light green, Pale Star (Pantone 12-0626); Old wood is more brown, Ash (Pantone 16-3802).

Crotch angles. - Angles are selected at 45 to near 90 degrees in first year of tree training. Natural angles are within the normal range of standard varieties for a semi-upright tree.

Leaves:

Size. - Medium; 13 to 17 cm length, including the petiole; 3 to 4 cm width. Measurements were made on vigorous upright shoots of summer growth.

Thickness. - Regular and average for commercial nectarine varieties..

Form. - Lanceolate.

Apex. - Acute.

Margin. - Serrulate, slightly undulate.

Base. - Cuneate.

Surface. - Upper, glabrous; Lower, medium large veins that are pinnately netted.

Color. - Lower surface is green, Avocado(Pantone 18-0430); Upper surface is slightly darker green, Mosstone (Pantone 17-0525). Petiole and mid-vein show red anthocyanin in autumn, characteristic in peach and nectarine for 85 to 90 days or less in fruit development period (bloom to ripe).

Glands. - Two to 4, small, reniform glands mostly on lower leaf blade, but occasionally on petiole. Leaf glands are moderately smaller than those on most commercial varieties. Leaf glands on young leaves are light green, Leek Green (Pantone 15-0628), darkening to Green Moss (Pantone 17-0636) on older leaves in mid- summer.

Petiole. - About 1 cm (0.8 to 1.1 cm) length; 1.3 mm diameter. Light green, Poison Green (Pantone 16-6444) darkening to Plantation (Pantone 18-0832) on older leaves of summer. Grooved longitudinally.

Stipules. - Medium (equal to most commercial peach varieties), usually 2 per bud, and abscising just before leaf becomes full size in summer growth.

Arrangement. - Alternate.

Flower buds:

Hardiness. - Hardy with respect to north central Florida winters (16F minimum observed).

Abundance. - Very high due to shorter than average internode length. Most buds set fruit in absence of spring frosts and show little evidence of bud drop.

Size. - Medium, average 3.5 mm length in mid winter.

Form. - Plump, conic and free.

Surface. - Pubescent scales.

Color. - Brown, Stucco (Pantone 16-1412) in late summer.

Flowers:

Blossom period. - One to 2 days before 'Sunraycer' nectarine - average 50% bloom February 5 to 10 most years at Gainesville, but occurring over a 7-10 day period. Time and length of bloom are dependant on ambient temperature.

Aroma. - Slight and pleasant.

Flower density. - Abundant, varying 1 to 4 per node, but usually 2. Density very high due to reduced inter-node length (see tree density).

Type. - Non-showy, location and seasonally variable within the range of commercial non-showy varieties. Average flower diameter - 22mm. Average petal length, 10 mm; width, 5mm. Texture smooth.

Color. - Orchid Pink (Pantone 13-2010) at flower opening, and within the pink range of standard varieties.

Flower parts. - Stamens and pistil size, shape and color are within the range of standard commercial varieties. There are 5 sepals and petals. Sepals average 4 mm length and 3 mm wide at attachment to calyx cup and triangular shape with a dull point at the distal end. Sepals are green, Amber Green (Pantone 17-0840) on the exterior with a smooth pubescent margin. Sepals are pubescent and petals are glabrous. Pistils are usually 1 per flower. Pistil length (from tip of stigma to base of ovary) averages 11 mm. Pistils are light green, Pale Star (Pantone 12-0626). Flower pedicel is 1 to 2 mm length.

Calyx cup. - Medium small in the size range of commercial varieties. Cup diameter is 5 mm at the time of flower opening and internal color is orange, Tangerine (Pantone 15-1247).

Stamen. - Anthers are light red to yellow, Orange (Pantone 16-1253), at flower opening, fading to yellow, Banana (Pantone 13-0947), before pollen sheds, common to many nectarine varieties, regular size. Number of anthers varies from 25 to 36, length is 7-9 mm. Filaments are light green, Pale Star (Pantone 12-0626).

Pollen. - Abundant and bright yellow, Snapdragon (Pantone 13-0840), common to many nectarine varieties.

Fertility. - Fully self fertile, and no cross pollination is required. Fruit set is abundant.

Fruit:

Maturity when described. - Tree ripe, May 3, 2001 at Gainesville.

Date of picking. - First, May 1, 2001; Last, - May 8, 2001 at Gainesville.

Size. - Uniform, medium large (large size for early mid-season maturity at 120 to 140 g).

Varies with fruit number per tree, soil type, climatic conditions and cultural practices.

Average equatorial diameter. - $2 \frac{3}{8}$ inches (59 mm).

Average polar length (stem to distal end). - $2 \frac{5}{8}$ inches (65 mm).

Pedicel size. - Length is approximately 7 mm; Width is approximately 3 mm.

Longitudinal section form. - Strongly oval.

Transverse section through diameter. - Round.

Suture. - Shallow and inconspicuous.

Ventral surface. - Usually rounded.

Base. - Slightly cordate.

Apex. - Usually rounded to slightly obtuse.

Crater at stem attachment. - Flaring circular with fruiting branch depressing on base of fruit.

Depth is 6 to 9 mm; breadth is 18mm at top and 4 mm at pedicel attachment.

Skin:

Thickness. - Medium in comparison to commercial nectarine varieties.

Texture. - Medium in comparison to commercial nectarine varieties.

Tenacity. - Tenacious to flesh.

Color. - Bright red, Flame Scarlet(Pantone 18-1662), over 90 to 100% of skin. Ground color is bright yellow, Sunset Gold (Pantone 13-0940). Fruit exposed to sunlight have a higher degree of enhanced red skin.

Tendency to crack. - None observed.

Taste. - No astringency observed.

Epidermis. - Glabrous, waxy and smooth.

Flesh:

Ripens. - Evenly within each fruit.

Texture. - Firm, juicy, melting when fully ripe.

Fibers. - Very fine, small, tender, and abundant.

Aroma. - Moderate and in the middle range of commercial nectarine varieties.

Eating quality. - Good, moderately sweet, slightly acid. Soluble solids were about 11 brix and titratable acid was 0.86 at 0.9 Kg penetrometer firmness.

Juice. - Abundant.

Color. - Yellow, Amber Yellow (Pantone 13-0942), with slight speckled red in the flesh

near the fruit tip, especially on stressed trees under dry, hot conditions. There is no red at the pit.

Browning by oxidation. - Very slight on tree ripe fruit beginning to soften.

Amygdalin. - Undetected.

Stone:

Type. - Semi-freestone.

Size. - Medium small: average length is 30 mm; average width is 23 mm; average thickness is 18 mm; average wall thickness is 5-6 mm.

Color. - Grey Sand (Pantone 13-1010) when freshly exposed.

Form. - Oblong.

Base. - Straight.

Apex. - Acute.

Sides. - Near equal.

Surface. - Irregularly furrowed toward the ventral edge, pitted from base to apex.

Ridges. - Jagged toward the base.

Tendency to split. - None observed.

Seed. - Bitter (amygdalin is abundant) kernel. Viable if stratified upon removal from fruit at harvest, and without drying. Kernel is brown, Sunflower (Pantone 16-1054) when first removed from ripe fruit. Side is 14 mm length, 9 mm wide and 3.5 mm thick. Shape is acute tip with obtuse base and overall ovate shape.

Use - Fresh; dessert.

Resistance to disease. - High resistance to bacterial spot incited by *Xanthomonas campestris* pv.

pruni (Pers.) Diet. Resistance to other fruit and tree diseases are within the range for commercial nectarine cultivars in Florida. No unusual resistance or susceptibility to insects and diseases noted.

Keeping quality. - Excellent after 10 days at 2C and with minimal bruises or scarring appear on skin.

Shipping quality. - Degree of firmness at harvest and firmness retained in refrigeration for 10 days at 2C, with no internal breakdown of flesh or appreciable loss of eating quality, indicates fruit should be highly acceptable for shipping.

We claim:

A new and distinct nectarine tree variety as illustrated and described, characterized by a low chilling requirement, and bearing fruit having firm, yellow and melting, semi-freestone flesh of high eating quality and an attractive, high percentage red skin with fruit ripening in early May or about 3 to 5 days before 'Sunraycer' at Gainesville, Florida.

Wayne B. Sherman

Date

Abstract. A new and distinct variety of nectarine tree, denominated 'Sunbest', has a low winter chilling requirement estimated at 225 chill units (cu). The tree is of medium size, has a moderate vigorous and upright growth habit. It has non-showy, pink flowers and leaf glands are small, with reniform shape. Trees of 'Sunbest' are self-fertile and regularly bear heavy annual crops of early season fruit that are large for its ripening season. Fruit are uniformly firm and yellow with melting flesh which are semi-freestone. Fruit are oval, and uniform with substantially symmetrical shape, and have an attractive 90 to 100% bright red skin. The fruit of 'Sunbest' ripens about 3 to 5 days before 'Sunraycer' nectarine in early May at Gainesville, Florida.